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Glutting the Honey Market.

President J. E. Pleasants, at the meeting of the Southern California Bee-Keepers' Association, makes this remark: "There are now no more fears of glutting the honey market; for the foreign demand is almost unlimited. We have for years been knocking at these foreign doors, and now that they are opened, it rests with us whether they shall remain so, or not. We can here produce honey which is fit for the gods, and only such ought to be put upon the market."

Mr. Pleasants is right—the markets of the world are now open to us, and will take all the honey that we can produce—but it will be mainly extracted honey that will go abroad. There is too much risk attending the shipment of comb honey to foreign ports for it ever to become a staple in those markets. Hence, the necessity of properly ripening extracted honey, and putting it in convenient packages, to suit the trade of the world.

It is only a year ago that we said the day would speedily come when agents of the great metropolitan markets would scour the country for honey, as they do now for butter and eggs. This is now an accomplished fact. Agents from New York and Boston, have, this fall, been sent to visit the larger producers of honey, to buy their crops at their very doors, and tons upon tons have been so purchased this very year. This does but presage the coming demand, and clearly indicates the fact that honey has become a staple product.

Just now the home markets are fully supplied, but very soon the foreign

demand will clean them out, and then we may look for a more lively demand and better prices.

The Glucose Fraud.—In answer to a query concerning glucose, the Chicago *Inter-Ocean* says:

"Glucose is essentially the same as grape sugar, and glucose syrup is nearly identical with pure strained honey. It consists of 24 parts of carbon to 28 each of hydrogen and oxygen, whereas cane sugar contains the same amount of carbon to only 22 parts each of hydrogen and oxygen. It is manufactured from the starch in corn and other grains, by the action of dilute acids and alkalies, by a process too technical to be described here. It is not unwholesome, but does not possess the same degree of sweetness as cane sugar."

In stating that commercial "glucose syrup is nearly identical with pure strained honey," the *Inter-Ocean* is assisting a fraud, and winking at adulteration. It is *not* honey, but a fraudulent and poisonous adulteration, prepared by the use of sulphuric acid, and should be avoided and denounced by all honest persons. To sell it for honey is a swindle upon the purchaser, aided by the *Inter-Ocean*.

Home Market.—The Pine Grove, Pa., *Herald*, says that Mr. W. H. Stout, of that town, has been very successful with his bees this year, and that they have gathered a large quantity of a very superior quality of honey, that he has sold readily at 25 cents per pound in his home market.

In answer to several inquiries we will state that the *American Bee Keeper*, Lebanon, Mo., is the bee paper we mentioned some time since, that has issued no number since August. If any have been published they have not been received at this office, and it is to be presumed that it also has "ceased to exist."

Interesting Statistics.

We have heard it remarked that the North American Bee-Keepers' Society, at its late meeting at Cincinnati, O., appointed a committee for the purpose of collecting statistics on "Bees and Honey," to report at the next meeting of the Society. And we are further informed that we were appointed a member of that Committee—perhaps the Secretary will be able to tell us if such is the case, though nothing is said about it in his report, published in *Gleanings in Bee-Culture*. And we should also like to know who were appointed on that committee, and what they were requested to attempt to accomplish. We say attempt, for we well know the difficulties attending such a work, and the expense and labor it entails, especially if it is to encompass the whole of the territory embraced by the "North American Bee-Keepers' Society."

Speaking only for ourself, we regret that any part of such a work is demanded of us, for we have already more labor than we can perform with any degree of satisfaction to ourself and others, but we will do all we can to further the object—if it is to be accomplished.

Dr. Miller, the President of the Northwestern Bee-Keepers' Society has figured out some statistical items of interest, in connection with the Tables already published of the two conventions held this year in Cincinnati and Chicago. Believing that these items will be read with interest, we give them to our readers in full. They are as follows:

On page 681 of the BEE JOURNAL is given a statistical table of fifty apiaries, represented at the Northwestern Convention at Chicago. Summing up, we find as follows:

Total No. colonies last fall.....3,339
Average No. to each apiary.... 67
Colonies lost in winter..... 85
Colonies lost in spring..... 79
Colonies beginning the season..3,122
Colonies devoted to other purposes than honey..... 62
Colonies at present time.....5,432
Average No. per Apiary..... 108½

Production.	Pounds.
Total comb honey.....	167,510
Average for each owner....	3,350
Average for each colony....	53½
Total extracted honey.....	107,960
Average for each owner....	2,159
Average for each colony....	34½
Total production, both kinds.	275,470
Average per owner.....	5,509
Average per colony.....	88

On page 664 of the BEE JOURNAL, is given a recapitulation of reports from 53 apiaries represented at the

North American Convention at Cincinnati. A comparison of the two may be interesting, if not instructive. It is not wise to draw conclusions hastily, and whether the favorable showing of the Northwestern, in some respects, as compared with the country at large, is due to locality, to a specially favorable season in the Northwest, to an adverse season in other localities, or to some other circumstance, I will not pretend to say.

The average number of colonies last fall, per owner, is nearly the same, being 66 for the North American and 67 for the Northwestern.

The North American lost 1.89 per cent. in wintering, the Northwestern 2.55 per cent., a small loss in each case, but the loss of the Northwestern was about one-third greater than the North American. On the other hand, the North American lost nearly double as much as the Northwestern in spring, the loss of the North American being 4.12 per cent., that of the Northwestern 2.37 per cent. Taking both winter and spring, the North American lost 6.11 per cent., the Northwestern 4.92 per cent. In neither case was there a very heavy increase of colonies. Taking the spring count as a basis, the North American increased 53.8 per cent., and the Northwestern 73.9 per cent.

Of the colonies of the North American, 20½ per cent. were used for other purposes than honey-raising and only two per cent. of the Northwestern.

Deducting these, in each case, from the spring count, we find the number of pounds of honey, per colony, to be as follows:

	North American.	Northwestern.
Extracted.....	40.7	35.2
Comb.....	19.3	54.7
Both kinds.....	60.0	89.9

Thirty-two per cent. of the North American's honey was comb, and 60 per cent. of the Northwestern's.

Looking at individual results, some unusual ones are given on page 681.

It is difficult to compare results where one man runs for increase, a second for comb honey, and a third for extracted.

In order to have something as a basis, although I am not at all sure it is a correct one, I have figured the net profit of increase at \$5 per colony, the net profit on comb honey at 16 cents and extracted at eight cents per lb.; and, at this rate, I give below the gain, per colony, of several bee-keepers, naming first the number of colonies kept by each:

D. Rawhouser.....	15	\$44 73
L. H. Scudder.....	63	29 35
H. Newhaus.....	34	28 82
H. W. Funk.....	75	27 87
P. P. Nelson.....	20	24 20
M. L. Trester.....	20	22 50
J. K. Snyder.....	43	21 95
Oatman & Son.....	229	20 88

These are certainly very desirable results, but to know more definitely about them we should know something about the quality and condition of the honey, also the condition of the new swarms. Mr. Rawhouser could hardly have gained his success with-

out season and locality of first quality, yet even then it would require the management of a first-class bee-keeper. It would have been interesting to know the result with ten times the number of colonies, and this is, I am afraid, too often not taken into account as it should be.

I admire the results obtained by Messrs. Scudder and Funk more than those of Mr. Rawhouser, because they had four or five times the number of colonies, and the item which most nearly excited my envy in looking over the whole list is that of Oatman & Son, who, although they make a poorer showing by colony than any others I have named and some I have not named, more than make up for it by getting such magnificent aggregate results. Too much stress is apt to be laid on exceptional yields from single colonies or a few colonies; I am more interested to know the yield per apiary or per man.

C. C. MILLER, 174-202.

Marengo, Ill., Oct. 30, 1882.

If we are correctly informed Dr. C. C. Miller is also a member of the committee mentioned above. He is just the man for the work, being perfectly at home in figures. He has a clear head, sound brain, and unbounded energy.

Anticipating our getting up a statistical table this year, we have received the following:

Report of W. C. Preston, Iowa City, for 1882. Occupation, teacher.

No. of colonies in spring.....	14
No. of colonies on hand now.....	27
No. lbs. comb honey.....	100
No. lbs. extracted.....	2800

Total .. 2900
Pounds average, spring count.....207
Wintered in chaff packing.

EDITOR BEE JOURNAL:—The above is my contribution toward making up statistics of the honey industry for 1882.

It is to be hoped that the task, so well begun by you last year, and of such great importance to the bee-keeping craft in general, will be taken up again this season, and that you will have the hearty co-operation of all bee men throughout the Union in making these statistics as complete as possible. I have no doubt all the apiarists of this city and vicinity will send in complete reports.

WM. C. PRESTON.

As before stated, we shall not get up a statistical table this fall. As the different societies are now getting up tabular statements there is no need of our doing so. We may, however, at some future time, aggregate them, to ascertain the consolidated results.

New subscribers for the Weekly BEE JOURNAL for 1883, can obtain all the rest of the numbers for this year by sending \$2 to this office.



MISCELLANEOUS.

Does the Queen Lead the Swarm?—The *British Bee Journal* remarks as follows on this subject, correctly concluding that she does not:

There is an impression prevailing among the uninitiated that the queen of a hive leads off the swarm, but this is by no means the case with first issues, for, as a rule, the queen does not come forth from the hive until the greater part of the bees are on the wing. Another erroneous idea in existence is that the queen bee is the first to alight upon a branch or a bush, and that the bees congregate about her, but the reverse of this is the fact. When a swarm begins to issue, if the bee-keeper will place himself on the shady side of the hive and watch the stream of bees which pour forth like an army through a gateway, he may see the queen come out, and, if inclined to prove our assertions, he may capture and cage her, and put her in his pocket while he watches the proceedings of the bees. When the throng is circling in the air he may imagine that the bees are searching for her, and will perhaps conclude that as they cannot find her, they will return at once to the hive; but no, they will first congregate near a convenient tree or bush, and make a great noise sufficient to attract the attention of her majesty, if she were abroad, and they will alight and form a cluster, and wait for some minutes to give her an opportunity of joining them. If now she be taken to them, she will join the mass and all will be well; if not, the bees after a short time will disperse and return to the hive. Now this kind of experiment has been so often proved that it may be taken for granted when a swarm of bees has alighted, and afterwards returned to the hive, that the queen was not able to join them, or she would assuredly have done so.

Enormous Honey Yields.—The *Bee-keepers' Magazine*, for November, contains the following enormous yields of honey from one colony of bees during the past summer:

Mr. Ira Yager, Vice President of the New Jersey and Eastern Bee-keepers' Association has taken 496 pounds of nice honey from a single colony of bees. If any other Jerseyman has ever beaten this, let him report at once. Mr. Y. has 132 colonies. He reports the season as poor.

Mr. B. F. Carroll, of whom so much has been said in the bee papers, has at last accounts reached the enormous and unparalleled yield of 800 pounds of nice honey from one colony, and the end is not yet. Texas is the banner State and Mr. Carroll now wears the belt. Who dare prophesy that 1,

000 pounds will not yet be taken from single colonies when the cultivation of honey crops shall be fairly inaugurated?

Since writing the above regarding Mr. Carroll's wearing the belt, the following has come to hand. Dr. Farley, of Raleigh, Navarro Co., Texas, has a colony of bees which has sent out ten swarms, and from these and the old colony he has taken about 1,200 pounds of comb and extracted honey. Now, reckoning this honey at only ten cents per pound, and the new colonies (from this one hive) at only \$3 each, and we have \$150 as the product of one colony in one season, which is 32.50 better than friend Carroll has done, and he sold his honey at 15 cents per pound, all but 100 pounds which brought 12½ cents per pound. The report comes backed up by good authority, and if not disproved, it entitles the Dr. to the "belt."

Honey Harvest Abundant.—The Cedar Rapids, Iowa, *Standard* in an article on keeping bees, says:

The honey crop of this year exhibits the general affluence; it is abundant and very good. Clover, buckwheat, tulip blossoms, horsemint, goldenrod, Spanish needles, and other producers of nectar, have borne an unusual supply of sweets, and the bees have faithfully gathered it and stored it in the hives provided by man for their accommodation and spoliation. At the recent Convention of the North American Bee-keepers' Society, at Cincinnati, it was stated that in 1870 only about \$1,000,000 was invested in the pursuit, but in 1879 the profits of it were estimated at \$16,000,000—showing that the delightful and profitable business of bee-keeping is beginning to attract the attention it so richly deserves.

Prepare for Winter.—Mrs. L. Harrison, in the *Prairie Farmer*, gives the following advice, including her plan for preparing bees for winter:

The Good Book says, "look well to thy flocks and thy herds," and I suppose that the bees were such tiny folks that they were forgotten then, as they are now, by most farmers, except when they happen to think that there might be some honey in the hives, or they make an uproar by swarming.

Although the fall has been so lovely, warm and balmy, day after day, there may be cold, driving storms and blizzards before flowers bloom again, and we should be prepared for their reception. Bees never freeze to death—O, no! they are dead before they reach the freezing point. And they are not a bit like fish, for they cannot live in the water. Therefore they should have a good roof over their heads; a leaky roof has caused the death of many a fine colony of bees. The severe winter of 1880-81 caused such havoc among our bees, that we hesitate to give directions for others to follow. That season, with few exceptions, they flew on the first of March, but many of them died by spring-

dwindling before flowers bloomed. They were in tight, closely-jointed hives, well painted, and not a leaky roof among them, and the bees covered with chaff cushions.

Perhaps they were coddled too much. In the spring we purchased a black colony of bees, in a Langstroth hive, made by a saw and hatchet carpenter, with such loose joints that the bees are always trying to enter them when honey is scarce. This colony, the owner said, "he didn't care whether it lived or died," and took no care of it whatever; and yet in the spring it was boiling over with bees, and was a bonanza to us in strengthening up our weak colonies.

Many instances similar to the foregoing show that bees can endure cold, but that impure air is fatal to them.

How to protect our bees so that they will keep dry, have pure air and no cold draughts through the cluster, seems to be the desideratum for successful wintering. Old settlers tell us that when they dwelt in log cabins, with their great fire-places and roaring chimneys, their families were healthier than they were after they built comfortable houses; and that their fowls, roosting in trees, and bees in log gums which sometimes cracked from top to bottom, lived through it, and never had cholera. What are we going to do about it? Go back to log houses and gums? Heaven forbid! But we are going to have pure air and keep comfortable at the same time.

Some of our readers may like to know how we are fixing up our bees for winter. On part of our bees we place Hill's device, which is similar to this: If a keg hoop was cut into four pieces, and a strip nailed to the middle of each, so that they would be three inches apart, it would form a hollow under which the bees can cluster, and pass readily from frame to frame. On this we spread new muslin, and it reaches over the frames far enough so that when the cap is put on, the bees are securely fastened below. We have not devices enough for all, and on the remainder we place four corn cobs, which we think will answer the purpose as well. Our bees are in the eight frame Langstroth hives, and we have made a tall hive of a few of them by putting four frames in the upper hive or cap, right over the four in the lower story. These frames are in the center of the hive, and we put chaff or dry leaves each side. We leave the entrance open and the same size as in the summer. Chaff cushions, four or five inches in thickness, are put in the cap over the bees, and complete the outfit for every hive. An abundance of fresh air is given above the cushions by raising the covers. It would be better to bore holes in the cap at each end, under the projection of the roof.

Articles for publication must be written on a separate piece of paper from items of business.

When changing a postoffice address, mention the old as well as the new address.

CORRESPONDENCE

For the American Bee Journal.

My Experience with the New Bees.

G. M. DOOLITTLE.

In the fall of 1881, I obtained some of the new races of bees to give them a trial, for how should I know for certain of their superiority, or otherwise, unless I tried them myself? To be sure, I had heard what others had said, *pro* and *con* regarding them, but these persons did not live in my locality, neither would their tests be the same that I should apply. This is where the reader of bee lore often draws wrong conclusions, and the different opinions of various virtues clash. The same locality, and the same tests would reconcile much that now appears to be directly opposite in its teachings.

On an average, neither the Cyprians or Syrians came out in the spring as strong as the Italians, but if we had had a winter like 1880-81, the case might have been different, still I am satisfied that in a mild winter, their wintering qualities are inferior to the Italians, as my experience is, they are more restless, thereby causing greater mortality, and a greater consumption of honey. From all reports, I expected to see them start to brood-rearing more rapidly in the spring, than the Italians; but in this I was disappointed, for they were nearly a week behind, and kept so until into June, when, about the time the Italians commenced to swarm, they began to exert themselves beyond anything I ever saw done by the Italians.

In this matter of brood-rearing the Syrians seemed to be ahead, beginning a little sooner, and filling every available cell with brood during the month of July; but as fall came on apace, I could see no difference between them and the Italian, as regards late brood. Right in the height of the honey season, they fill their hive with brood to overflowing, and with a person who does not spread brood so as to get every available cell full at the commencement of the honey harvest, this trait is just the thing, for no matter how much honey there is in the brood-chamber, or how fast it comes in from the field, the Syrian queens are not to be crowded down to a small portion of the bottom of the combs, with honey, as the Italians sometimes are. This is splendid for those who do not wish to be to the bother of getting their bees ready for the honey harvest.

I also found they would enter the boxes much more readily, if left to themselves, than would the Italians, and the capping to their cells of honey was whiter than those of the Italian; much resembling the work of the blacks in this respect. The yield of comb honey from them, nearly equalled the average yield throughout my yard and it was excellent in quality.

I was quite enthusiastic regarding the Syrians (and should have been over the Cyprians had they not been so vindictive) until I came to prepare them for winter, when I found that, while nearly every one of my Italians had from 10 to 15 lbs. more honey in the hive than they needed for winter, these new bees had to be fed about that amount, to give them honey enough to winter upon. This sustains friend Heddon's idea, as regards the possibility of our having too much brood for profit. It also sustains what I have said regarding the preparing of our bees, in just the right time for the harvest and not afterward, thus having them consumers, instead of producers. Could I have had a good yield from buckwheat these bees might have been of use, if they had not still kept on breeding to such an extent as to consume the larger part they gathered.

One thing I noticed of the Cyprian bees, which I have never seen in print, was that they were from 1 to 2 hours later in starting out in the morning, than any of the rest of the bees. Hot mornings, during basswood bloom, the other bees would be tumbling down, on the bottom boards to their hives, with great loads of honey, before sunrise, but scarcely a bee would be seen to leave the Cyprian colonies, until an hour after sunrise, when they would sally out with a rush, and seem to work faster than the rest for a few hours, after which, the difference was not noticeable. As to vindictiveness, the Cyprians are ahead of anything I ever saw, as soon as the hive was opened, but if undisturbed, a person could walk in front of their hive, and sit there without being molested; but raise the cover to the sections, where there was glass on one side, and they would rush toward you, against the glass, with perfect fury, and if there chanced to be a few on the outside of the sections, but separated from the main cluster, they would dart on to me, taking hold with such a grasp that it was impossible to shake them off. With all other bees I ever saw, a few bees isolated from the cluster will not sting, but on the contrary run till they can find a place to join the cluster.

The Syrians I found quite peaceable, until deprived of a queen, when they were nearly as bad to sting as the Cyprians. In not a single point, did I find the Cyprians superior to the Italians, unless I except the whiteness of comb produced, and in many points they are inferior. Their stinging quality was the worst of all, and effectually debars them from being kept, as a pure race, in my opinion. I care for no further experiments with them, and shall supersede them with my more worthy Italians.

As to the Syrians I have them from 4 different parties, and shall try them again another year, being careful, as in the past, to clip the heads of all the drones, till I find them worthy of a permanent place in my apiary.

Borodino, N. Y.

[The new races of bees are now on trial—let it be a thorough one.—Ed.]

For the American Bee Journal.

Electric Alarm for the Apiary.

C. H. DIBBERN.

Mr. Kohnke has described, in the BEE JOURNAL on page 682, a very good electric thief alarm; but it strikes me as being too complicated and expensive for most of us. I have had an automatic alarm in use, the present summer, that works like a charm, and did not cost me over twenty-five cents.

During the past few years I have been greatly annoyed by thieves robbing my hives and even carrying them off whole. In June, these depredations commenced again, and my son and I then put our wits to work to trap the thieves.

Every apiary has one or two sides that are particularly exposed to thieves. On these exposed sides we drove stakes so that the top would be about eighteen inches high, into these we put common screw eyes. Now we ran a copper wire, such as is commonly used for private telephones, through these, and into one corner of our work shop. Here we place a trap, which consists of a weight of about twenty pounds, fastened on the end of a two-foot piece of wood. Now fasten the other end to side of shop, with a screw, so that the weight arm will move up and down easily. Now attach your trip wire to the arm, so the weight will be suspended high and drawing the wire tight. Now cut the wire near the trap and connect it again by bending the ends slightly and hooking them together, so that any pull on the outside wire will cause the wire to part, and let the weight drop. The same will happen should the thieves cut the wire. All sharp angles in this wire should be run over screw pullies. Now to the weight arm attach another wire, to run to the house. At the house we placed an old clock that was worn out, all but the striking part. Tie a string to the ratchet that holds the strike wheel, and over through a hole in top of clock and attach to the wire. Tie a nail or button on the wire, where it comes through the wall, so that the weight in the shop can only pull the end in the house, an inch or two, so it will set the clock striking, but not bind the striking parts. If properly put up, and any person comes against the trip wire, it will be sure to break at the hook splice; this will cause the weight to drop, giving the house wire a sharp pull, instantly making the clock strike.

Now, jump out of bed, get your revolver quick, and run out into the apiary in your night clothes, as I have done several times this summer, only to hear some one jump over the fence, and disappear in the bushes and darkness. You can blaze away, anyhow, and have a little Fourth of July all to yourself. Now you can go back to bed, and congratulate yourself that you was too smart for them that time.

By a little ingenuity the trip wire can be run across windows in honey rooms or other places where thieves are liable to break in.

Milan, Ill., Oct. 27, 1882.

The Wintering of Bees.

D. A. JONES.

This is a subject which has baffled our most scientific bee-keepers for ages, and a doubt still seems to exist in the minds of some if this subject has been fathomed, which, however, to my mind, is not the case. To me the wintering of bees is very simple, and I have no more question about wintering every colony in proper condition than I have in wintering horses, cattle, or any other kind of stock. It is only necessary to have a knowledge of their requirements; complying with these, means success.

I have tried all the different methods; spent thousands of dollars in experimenting, and have no hesitation in saying I have had a larger and more varied experience than any other bee-keeper. I have succeeded for years in wintering by the system which I have adopted, and hundreds of others have been successful who have carefully followed the same instructions and directions.

This system is so simple and easy that any novice can carry it out without difficulty, and can be applied to suit all bee-keepers irrespective of number or kind of hive.

I will give five different methods of wintering, viz: In Bee House; in Cellar; in Clamp; in Chaff or Sawdust Hives; in Boxes Packed.

WINTERING IN BEE HOUSES.

To do this successfully it should be so constructed that the out-door temperature cannot affect that of the bee house; and, in order to accomplish this, its walls should be packed tightly with two feet of dry sawdust or three feet of chaff, packing overhead same thickness, and the bottom so protected that no frost can penetrate. Next, it should have a ventilating tube at the top, of not less than one square inch to each colony of bees. It should have sub-earth ventilation by means of a tube laid below the depth frost will penetrate, and from one to three hundred feet in length, coming in contact with the outside atmosphere at the other end; as air passes through this tube it is tempered by the distance through the earth, and comes into the house at an even temperature. By means of slides at these ventilators, the temperature can be arranged in the bee house, which should stand from 43° to 46°, and in no case should it fall lower than 42°. Now, if a bee house is constructed in this way it will not change its temperature more than from 1° to 3° during the winter, and can be regulated, as before stated, by means of ventilating slides. Have tight fitting triple doors, making two dead air spaces.

When the bee house is filled, and during warm weather in the spring, where a person does not want to set them out until the first pollen appears (which is generally from Tag Alder or Black Willow), it is necessary that the temperature of the room be kept at the wintering standpoint. This may be done by means of an ice-box or refrigerator, filled with ice or snow,

and suspended at the top of the room in close proximity to the ceiling. The bottom of the box must be so constructed that while the warm air may be allowed to pass up through the refrigerator, the drippings will not drop to the floor and create a moisture. This latter may be prevented by means of a tube running from the box down through the floor.

PREPARATION.—All this must be done in the fall. They should be strong in stores, have plenty of young bees, and should be crowded up to have no more comb than they can cover, and these should be well stored with pollen and honey (say 20 to 30 lbs. of the latter). If you have not this quantity, feed granulated sugar and water (2 lbs. of the former to 1 lb. of the latter) brought to a boil and allowed to cool before feeding. This makes a good, and even better, feed than the best of honey, and should be fed in time for the bees to seal it over. Commence feeding about the 1st of September, or immediately after the first frost has killed the flowers. *No glucose should ever be fed.* Winter passages should be made through the combs, between which a space of half an inch should be left. During the last sunshining days in the fall remove the lid and cloth from the hive and allow the sun to shine in; this purifies and dries them. Then put on a cloth free from propolis; that same evening carry the bees carefully into the house, placing them on a bench 10 to 12 inches from the floor or ground; this keeps them out of the carbonic acid gas, which is given off by the bees in the hive, and which sinks to the lowest part of the bee house. The lids should be removed, and only a cloth or cushion of chaff or sawdust allowed to remain on the hive. Leave the entrance wide open.

When the first row has been placed on the platform, from 2 to 6 inches apart, take two strips 1 to 2 inches wide, and place on top at the rear and front of the hives, and upon these place another row, so that the spaces between the hives in the second row will come over the center of the hives in the first row, thus allowing a free circulation of air and the escape of the moisture. Thus—



Continue the above until all the hives are placed. Care should be taken to have the stronger colonies in the bottom rows.

Two thermometers should be placed in every house—one opposite the bottom and the other opposite the top row, the former indicating 43° and the latter 46°.

Keep the house perfectly dark and let them alone until you set them out in the spring, unless they show signs of dysentery by soiling the entrance of their hive, in which case take them out quietly on the first favorable day and give them a fly, taking care to replace the hive immediately after they have returned from their flight.

WINTERING IN CELLARS.

The preparation and management in the fall and throughout the winter is the same as is necessary in the bee house, but they must be placed at least two feet from the cellar bottom; keep the temperature the same as in the bee house.

Do not allow any decaying vegetables in the cellar with the bees. If they show signs of dysentery and the weather is fine, give them a flight, being sure to always put them on the same stand again after the first flight. Never leave them out over night, but put them back in the cellar after they return from their flight. Set out of the bee house and cellar the first favorable weather when pollen appears.

The hives must all be examined carefully when setting out, and only what combs the bees can cover must be left. Take care that plenty of stores are left in the hives, and have the bees crowded together as much as possibly by the use of the division board.

WINTERING IN CLAMPS.

Prepare the colonies the same as before. Make a platform six inches above the ground and wide enough to have from 10 to 12 inches of space in front of the hive, 12 to 15 inches at the rear of the hive, and a platform long enough to hold all your hives. After placing them 4 to 6 inches apart, if there is any space in the rear of division board, pack it with dry sawdust or chaff; remove the lids and put clean cloths on the frames, or, if a box hive or log gum, bore half a dozen inch holes in the top of the hive, and that covered with cloth allows moisture to pass up into the packing above. Place a stick, half an inch thick, each side of the entrance, long enough to reach the edge of the platform; upon these lay a board, by means of this there will be a communication with the outside at all times; then drive stakes at the front and rear of the platform, set up boards all around this platform inside the stakes of sufficient height to allow packing 18 inches above the hive, pack firmly with dry sawdust or chaff around and between the hives and about 18 inches on top, then lay boards on the top of the packing, upon these place stones or other heavy weights (100 lbs. on each hive is not too much). This will pack firmly and prevent heat from passing up through it from the inside of the hive and yet allow moisture to escape. The packing should not be removed until about fruit blossom, except slightly to examine condition of colonies.

This clamp should be banked outside sufficiently to prevent frost from getting under; if sawdust were packed under the clamp it would be better. A slanting roof keeps off rain and thawing snow.

WINTERING IN DRY GOODS BOXES.

Where parties have only a few colonies old dry-goods boxes may be taken, the bees placed in them and packed in a similar manner to a clamp, but there should always be 6 inches of dry packing under the hive, preventing frost

from below. Care should be taken to make the entrance perfect, enabling them to have access to the outside, so that they may have a flight when the weather is favorable.

WINTERING IN CHAFF OR SAWDUST HIVES.

These hives are intended to winter safely without any outside packing, only requiring the same preparation as those for the bee house, viz., strong in bees, plenty of young, plenty of stores (if not sufficient, feed), crowd up on a few combs, cut a passage in the comb, the combs half an inch apart, and fill up the space in the rear of the division board with dry sawdust or chaff, filling the space, between the top of the frames and lid, with the large cushion.

Taking all seasons through, nothing pays better than a careful preparation of bees for winter, and I would caution people to beware and not expect this winter to be the same as last, as that was the best winter we have had for many years, and the indications are that the next may not be so favorable, and those who do not properly prepare will likely be found mourning over their empty hives in the spring.

I sincerely hope that no one will have to repent their neglect in this matter when too late.

Beeton, Ont.

[We give the foregoing plans delineated by Mr. Jones, as there are so many inquires as to how he prepares his bees for winter.—ED.]

Southern World.

The Progress of Scientific Bee Culture.

C. R. MITCHELL.

The subject of bee-keeping has claimed the attention of many of our most learned men of ancient and of modern times, who looked upon it as a science worthy of their study and their philosophy. Grätwell, Schirach, and Huber the elder, were among those of antiquity who devoted their wisdom to the advancement of the knowledge of the habits and character of these insects, and to the latter especially, as every school-boy knows, we are indebted for much that is of inestimable value in the studies of the naturalist. Although he became blind at the early age of fifteen, his works gave an impulse to this branch of rural industry in Europe, which caused the management of bees in common hives to be brought to a high degree of perfection. Lombard, Radonan, Desormes and others, in the first part of the present century spread abroad this acquired knowledge and added to it the results of their own ingenious inventions, observations and experiments.

Debeauvois, in 1844, invented his movable frame hive, but it was found to be too inconvenient for general use. Its merits were contradicted and its inventor ridiculed by all, until Mr. Bastain, a clergyman of Germany, published a work in which he gave proper credit to the movable frame of

hives, and Mr. Sagot offered to the public an improved frame hive of his own construction. In spite of all opposition, this new system worked itself into the favor of many apiarian societies, and through them the movable frame hive began to be widely used with the recommendation of such learned men as M. M. Balsamo Crivelli, Visconti di Saliceto, Angelo Dubini and Major von Hrushka, at the head of the bee culture of Italy, and to the last named of whom we are indebted for the principle of the honey extractor.

The improvements, inventions and discoveries made in Germany, in the last twenty years, are almost beyond number, and up to 1868 four hundred and twelve publications had been issued upon this subject. Notwithstanding the advances made by the countries of Europe in theoretical bee culture, none have excelled in the practical knowledge of the science the bee-keepers of our own grand commonwealth.

The theories of Dzierzon, the experiments of Berlepsch, and the precepts and examples of many of modern days have passed into our language and been given to us for our guidance and amelioration. What a vast difference to-day, even in our own land, from what was considered perfection in bee-keeping less than half a century ago, when to "let bees do as they have a mind to" was the orthodox philosophy of practice, and he who would experiment must suffer for his temerity.

A new field of enterprise opened up and bee-keepers and hive makers issued numerous patents, but none seemed to advance beyond a certain point until about 1850, Mr. Langstroth introduced his own ingeniously-constructed movable frames and their method of successful manipulation to the public mind. Perfection seemed almost attained; the interior of the bee hive need no longer remain a labyrinth of mysteries, and the assertions of the naturalist could be easily verified at every man's door. The golden-banded bees were imported from Italy, in the light of the new science, and the moth worm, the great bug-bear of inexperience, need no longer be feared as the destroyer. Under such favorable auspices as these, with numerous bee periodicals, modern conveniences and appliances, and gentle, industrious Italians, can it be supposed that bee culture could be other than a pleasant and profitable vocation, when properly and intelligently pursued?

You may search out a knowledge of the material, and stumble over the things which impede your progress, but if you adhere to the foggy notions of your ancestry and flatter yourself with the delusive hopes of abundant success, you will find a mountain of despair at almost every stride; while on the contrary, all obstacles fade with the fleetness of a shadow amid the progress and improvements of an enlightened age.

Bees in themselves have the same essential habits that were given to them when they first winged their

flight in the Garden of Eden, as permanent and as unvarying as the attraction of gravitation, or the natural laws of our solar system. They act alike under like circumstances, are incapable of education and learn nothing. It is by taking advantage of these unchangeable habits, that we can control their actions and make them subservient to our purposes at our own good pleasure, just as we take advantage of the immutable laws of the universe and appropriate them to our own conveniences for scientific investigation, domestic manufactures and foreign commerce. Review the annals of bee culture for the past few years, and you will find yourself astonished beyond measure, at the advancement it has made as a science, at the reputation it has achieved as a remunerative employment, and at its present magnitude and importance as a leading industry among domestic pursuits.



Local Convention Directory.

1882. Time and Place of Meeting.

Nov. 1—New Jersey & Eastern, at New Brunswick, J. Hasbrouck, Sec., Bound Brook, N. J.

3.—Iowa Central, at Winterset, Iowa, Henry Wallace, Sec.

20-30, Western Michigan, at Grand Rapids, Wm. M. S. Dodge, Sec.

1883.

Jan. 16.—Eastern N. Y., at Albany, N. Y. E. Quakenbush, Sec., Barnerville, N. Y.

11, Nebraska State, at Wahoo, Neb. Geo. M. Hawley, Sec.

16-18, Northeastern, at Syracuse, N. Y. G. W. House, Fayetteville, N. Y.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

LEONIDAS CARSON, Pres.

The Nebraska State Bee-keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-keepers' Association will furnish entertainment free to all visiting apiarists.

T. L. VON DORN, Pres.
GEO. M. HAWLEY, Sec.

Southern California Convention.

The following is the annual address delivered at the Southern California District Bee-Keepers' Association in Los Angeles City, Oct. 19, 1882, by Pres. J. E. Pleasants, who was re-elected president of the association:

Since last we met, another year has crossed the bridge of time and passed into the dark unknown. To some it has brought sorrow and to others joy. We should come to these annual gatherings, like workers to a hive, each one laden with the experience of another year. For whatever adds to our knowledge of the bees, and aids us in manipulating them, thereby increasing the quantity and quality of honey, is of great value. Therefore, an association which brings the bee-keepers together and imparts useful knowledge, causing them to advance in their avocation, is well worthy of encouragement; and those who are not willing to aid, should be classed as the lazy, yawning drones of the hive.

The bee season for 1882 cannot be called a success, but it is not as bad as it might have been. There has been fully one-fourth of a crop, with a fair increase of colonies, and the bees are now in excellent condition. The price of honey is better than it has been for years.

With "our mind's eye," let us take a retrospect of the bee business. In the year of 1875 we see a tidal wave, as it were, approaching. In 1878 it takes it to the highest point, where for a while it holds it tottering, for it is above its level. Then the wave recedes and it takes it down to the lowest depth, where it stays until 1880, when it slowly, but surely, commenced coming back to its true level.

This tidal wave, when it was going up, caused many mushrooms to engage in the bee business. These mushrooms crowded into every available place with a few colonies, expecting to make a fortune in a year or two, by increasing their bees at lightning speed; and they extracted, at the same rate, what they called honey, but it afterwards proved to be vinegar. When they started, they thought of revolutionizing the business; and so they did, by almost ruining the reputation of California honey.

The general supposition is that the drouth has injured the bee business. I would say not as much as the unscrupulous mushrooms. They are not worthy to handle

"Creatures that by a rule in nature teach
The act of order to a peopled kingdom."

Fortunately, for the honey interest, the mushrooms were so shaken up in the tidal wave, that they abandoned the business and "went to pastures new."

The apiarist well deserves to be called a benefactor to all mankind, for through his agency the bees utilize millions upon millions of flowers which would otherwise waste their sweetness in the mountain air. Let us gird ourselves anew, for we have good reasons for renewed enthusiasm in our calling. The future looks very

promising. Let us pull every oar; there is land ahead."

There are now no more fears of glutting the honey market; for the foreign demand is almost unlimited. We have for years been knocking at these foreign doors, but now that they are opened, it rests with us whether they shall remain so or not. We can here produce honey which is fit for the gods, and only such ought to be put upon the market.

There is a bright side to bee-keeping, even in a bad year. At the beginning of the winter our hopes are great; we expect plenty of rain and a large yield of honey; as the season advances, and no rain comes, we let ourselves down from a full crop to $\frac{1}{2}$, then to $\frac{1}{4}$, then, if we can save the bees; by and by, if we can save the combs, and at last are well satisfied to save the hives. In the face of all the difficulties that the bee-business has had to contend with, I would say, that if it is properly managed, it is one of the most independent of pursuits.

Apiculture is advancing with rapid strides. The production of honey is now one of the great industries of California. The agricultural society could, if it would, aid this industry. It suffers neglect at their hands; for it is certainly worthy of a more prominent position upon their premium list, and I firmly believe we can get such a position if we strive for it.

I thank you for the honor of having been twice elected president of this association. To serve you faithfully, has been my most earnest desire. How far this has been accomplished, it is for you to judge. I hope that the time spent here will be agreeable and profitable to all.

Northern Ohio Convention.

The Northern Ohio Bee-Keepers' Association met in Norwalk, Ohio, Saturday, Oct. 21st, and was called to order at 10:30 a. m., with Samuel Fish, of Milan, President, in the chair.

The Secretary's report of the last meeting was read and adopted.

The President requested those present, who were not members, to join the Society, the gentlemen by signing the constitution and by-laws and paying a fee of fifty cents, and the ladies by signing the constitution and by-laws.

Eight new members were added: J. S. Terrell, North Ridgeville, Lorain county; O. J. Terrell, North Ridgeville, Lorain county; T. S. Johnson, Erie county; J. B. Darling, Hartland; E. Walker, Berlin Heights; J. S. Tilton, Norwalk; Mrs. M. J. Campbell, Steuben; Mrs. W. B. Harrison, Berlin Heights.

Mr. Fish said the season of 1882 had opened favorably for bee-keepers, and they were elated with hopes of obtaining large crops of honey, but it soon changed to a most unfavorable and unprofitable one. The cold and wet weather, which continued many weeks, not only prevented the bees from gathering any surplus of honey, but also from gathering sufficient for their own use, and many were obliged

to feed as late as the 10th of June, to keep their bees from starving.

He next took up the subject of wintering. He remarked that Langstroth had said "that the time would come when bees would be wintered as successfully as horses or cattle," and that James Heddon, a prominent Michigan bee-keeper, claims that he can, by his system, winter with perfect success. He advised all who had not prepared their bees for winter, to do so as soon as possible. Two things were to be guarded against, dysentery and spring dwindling. Some advised, as a precaution against these two, so-called, diseases, to remove all combs from the hive, containing pollen. He had not followed such advice, and had always wintered successfully. One very important thing was to prevent an excess of moisture (the principal cause of dysentery). This could be done by regulating the temperature and using absorbents. Absorbents remove the moisture.

Mr. Fish closed his remarks by giving a description of the house he uses for wintering. It consists of two rooms adjoining each other. One contains his bees, and the other a stove to regulate the temperature.

Mr. E. F. Waldron being called on, said he did not depend on books, or the experience of others, but on his own experience. Three things were necessary for successful wintering; warmth, dryness and good ventilation. He prepared his bees for winter Oct. 20th; did not think bees could cluster in the small spaces contained between two combs as used in summer, and retain the proper degree of heat; removed a comb from the center of the hive and left the space vacant for the bees to cluster in; used chaff cushions above the cluster to absorb the moisture. By the use of a tube he admitted the cold air into the hive in such a way that it did not come directly in contact with his bees.

[When Mr. Waldron examines his hives next spring he will probably find one of two things to have happened. His bees will either fill the space from which he removed the comb, with a new comb, or will all cluster on one side of the space.—Secretary.]

Mr. Bartow gave a description of his method of protection. He encloses the summer hive in a box three or four inches larger each way, and fills the space with leaves. Also packs leaves over the cluster. Would wait until after frost comes before he packed his bees for winter, and would not remove the packing until the weather became quite warm.

Mr. Boardman asked Mr. Fish how he knew an excess of moisture caused dysentery. Mr. Fish replied that with moisture in excess bees died with dysentery, without it they did not.

S. F. Newman said that to winter bees successfully several things must be attended to at the proper time. Each colony should have, as early as the 1st of August, a young and prolific queen, because young queens lay much later than old ones, and thus the colony is provided with a large stock of young bees; a very important fac-

tor in successful wintering. All preparation for wintering should be finished not later than October 1st, and it probably would be better not to disturb bees after the middle of September, for by that time they have begun to place their food where it will be easy of access, and if the weather is cool, form themselves into a compact cluster, which should not be broken afterwards.

Each colony should have at least 20 lbs. of sealed honey, and each space between the combs which contains bees, should contain enough honey for the bees clustered in that space to feed upon, for the less they are compelled to move about the hive to obtain food, and the quieter they keep, the less likely they will be to become diseased. Absorbents of some kind should be used above the cluster, for if the hive becomes damp and the combs mouldy, the colony cannot be healthy. The entrance of the hive should be large enough to give an abundance of pure air.

By following these directions, bees can be wintered in suitable bee-houses or dry cellars, or on their summer stands in chaff hives, with but little loss.

Mr. Albright said he had wintered out doors for six or seven years. Hives were not protected except by his house and a fence. Lost only one colony during the winter of 1881-2. Used the American hive.

Mr. Walker winters out doors. Does not like chaff hives. Would not give a cent for a cart-load of them. Uses a dead air space instead of chaff. Says chaff conducts moisture. Wintered in chaff hives in 1880 and 1881, and lost 34 out of 41. Left a sheet of oil-cloth between the cluster of bees and the chaff cushion. Uses only seven frames in brood chamber.

C. H. Hoyt said that several years ago he wintered in clamps with ventilation, and was successful. The year following he wintered in a damp cellar without loss. He was now using chaff hives, and preferred them to any other.

Mr. Boardman did not think bees could be wintered with as much certainty as horses and cattle. If they could, the business would be very profitable. There was no difficulty in getting old bees through the winter alive, but they died in the spring before there were young bees enough hatched to perpetuate a colony. He winters in a frost-proof house, without absorbents, without bottom boards, and with but very little upward ventilation.

Mr. Boardman thinks the moisture which collects in the hives is not produced by the breath of the bees, but by the cold air coming into the hive from the outside and mixing with the warm air inside, and that this moisture is utilized by the bees for drink. Prefers in-door wintering, on account of the less amount of stores consumed. Did not think sub-earth ventilation as good as a room containing a stove adjoining the winter bee house.

J. S. Terrel winters in Simplicity hive, with only a piece of cotton cloth over the brood nest. Removes one comb and equalizes the space left.

Intends to winter in a clamp the coming winter. Had fed liquid food in the winter time, when bees could not fly, without any bad result.

J. B. Darling said that he found no difficulty in wintering, but could not obtain any surplus honey, and would like to have some one tell him how to get it. He said he knew as much about bees now as he did twenty years ago, and no more.

The Secretary gave the following statistics, using numbers in place of the names of those persons making the reports:

STATISTICAL TABLE.

Apiarist, No.	Number of Colonies June 1, 1882.	Number of Colonies Sept. 20, 1882.	Comb Honey, pounds, 1882.	Extracted Honey, pounds, 1882.	Pounds of Wax obtained.
1	21	39	400	325	20
2	9	14	150	75	..
3	18	25	200	75	..
4	80	120	700	8000	75
5	70	91	1800	500	50
6	70	90	1350	1200	20
7	40	50	400	400	5
8	2	3	6	....	..
9	12	24	200	....	..
10	8	17	100	....	..
11	236	242	7000	500	25
12	8	15	300	....	..
13	6	20	25	....	..
14	26	26	404½	542½	10
15	2	2	....	....	..
16	39	46	3000	1000	..
17	11	25	75	240	..
18	235	280	1950	4520	40
19	5	6	87	12	..
20	300	390	1000	7920	60
21	14	25	125	600	30
22	3	3	75	....	..
23	22	50	112	1400	25
24	9	13	400	....	..
25	6	15	200	150	10
26	22	36	400	70	..
27	6	16	59	816	6
28	8	11	300	10	..
29	32	60	1500	500	10
30	20	25	500	....	..
31	22	48	100	....	..
32	9	12	50	50	..
33	27	47	700	100	..
34	42	63	1200	300	..
35	15	25	400	600	10

The table shows that 35 bee-keepers owned, June 1st, 1882, 1,453 colonies, which increased to 1,973 by Sept. 20th, 1882. These colonies gathered 55,099 pounds of honey, which was an average of about 28 pounds to the colony. The honey is worth about \$10,000, and the wax produced \$100.

After a vote of thanks to the Whitteley Association for the use of Whitteley Hall, the meeting adjourned to meet again the first Saturday in February, 1883.

Read before the Union, Ky., Convention.

Inter-Breeding of Bees.

DR. W. M. ROGERS.

The laws regulating the inter-breeding of bees have received too little attention from Apiculturists. With reference to the relations of characteristics, to any system of breeding or crossing, we are nearly ignorant. But little of the knowledge contained in works upon the honey-bee, refer to principles of breeding, or is susceptible of arrangement upon a line of law pertaining thereto. In a first effort at developing a science, one may be pardoned for venturing upon hypothesis. With greater light a theory may be promulgated. From accumulated and convergent facts law is deduced. With law clearly in sight, all factors are reduced to order, and sequences are definite. We shall probably die without the accomplishment—scientific precision in breeding bees. With the conviction that *all breeding* is arranged upon a line of law, I am hopeful that the future has much of interest and profit in store for us, arising out of correct interpretation of the phenomenal pertaining to the breeding, inter-breeding and crossing of bees.

Nature works upon a wider range of correlations than we might expect to find. Comparative anatomy makes us wonderfully near the animals below us.

Corresponding devices *always implying intelligence* are found everywhere about us, in applications of widest range. The device of an umbilical cord, serves a purpose alike for the horse chesnut and the man who aspires to know God or dares to deny Him.

The beautiful modifications of the feather serve the purpose of the swan upon the lake; the swallow that cleaves the air—the gay butterfly that flaunts her colors in the sunlight—the pretty moth that glints the moon-beams, or the industrious honey-bee with corsage of gold. I hope for much yet to be revealed from the wide and illimitable infinitude of intelligent correlations inhering in the co-ordinations of all nature. The pathway of intelligence is marked. The thought of the Mighty One is feebly followed by the thought of the tiny mould of his image. I have studied this subject until I have discovered my own ignorance and am grown curious to learn. I think I could hardly breed a flock of Cotswolds or of Southdowns, without some effort to discover the possibilities of modification of character inhering in them under differences in breeding and mating. I am satisfied that Bakewell had a law of breeding applicable to sheep—and that any man to-day could, with a knowledge of that law, take the same character of material and arrive at the same results essentially.

Returning to the immediate subject of this paper I express the opinion that the introduction of the new races of bees into America, affords opportunity for advance in discovery of the susceptibility of bees under the vari-

ous conditions of mating. In the AMERICAN BEE JOURNAL of Sept. 27th, 1882, the editor in reply to a question, answers: "If Italian queens are mated to black drones, they (the bees) are much more irascible than the pure blacks; if black queens mate with Italian drones, then the traits of disposition are most likely to be reversed." This statement has, I believe been asserted in substance by others. Accepting it as a fact and remembering that black bees are more irascible than Italians, we may fairly draw the inference that where these races are intermated, the drones participating in the inter-breeding, subordinate the cross in nervous character. This should be accepted as a rule, modified by exceptions that confirm the rule. From experiments conducted with whatever care and discrimination I am able to bring to the work, I have proved to my satisfaction that it is practicable to breed from Italian queens, mated to Cyprian drones, a progeny that resembles, in characteristics, pure Cyprians. The first and second generations from such matings are liable to sport. Italian queens bred to Cyprian drones do not produce the same results in royal progeny, as we secure from Cyprian queens bred to Italian drones. We are not to presume, therefore, that mere equivalents in blood will produce the same characteristics in bees, else a Cyprian queen mated to an Italian drone, and conversely, an Italian queen mated to a Cyprian drone, each producing half and half from the two races, should throw queens alike, which is not the fact. My experiments in 1881 and 1882, incline me to think that in mating between Cyprians and Italians, the drones are prepotent. In a letter just received from Mr. H. Alley, he re-affirms his oft-repeated statement of opinion to the same effect.

In order to correct results it will be necessary to conduct experiments with pure races. Pure blacks and Cyprians would afford excellent subjects. The most useful material results would probably be reached in inter-breeding Italians and Cyprians. The same assurances of correct matings could be had in these experiments, that we have in breeding Italians or Cyprians in purity, accepting the theory of parthenogenesis. I consider the blood of all drones as derived from the matings of their grand dams. Hence, when the queens are half and half of the two races, the drones would be pure bloods of the line of the queen, and when in process of breeding the drones are half and half of the blood of the race participating, the bees and queen progeny would be three-fourths bloods, if the order of the matings has been continuous. Consideration of these facts is essential to definite results in inter-breeding bees. I do not ignore the influence of climate, isolation, food and natural selection. As factors in breeding, all should be considered. These alone did not make Bakewell's sheep, nor the shorthorn cattle, nor the Essex pig. A sire of prepotencies is not an accident. In order to be improved, a race must offer in itself the suggestion of the

possibilities of its future. In other words, we do not create, but we evolve a character already inherent in the subject. More than this we may not hope to accomplish.

A cross and its inversion may differ widely in useful characteristics. A familiar illustration is found in the mule, an animal of great hardihood usefulness, and the invoice Hinny, a product so useless as to be rarely seen. In crosses, the strongest tendencies are back toward the pure blood of either parent, rather than a balanced result of the inter-breeding. Hence variations are quickly merged into the original type if bred into line. Hope of success in inter-breeding bees may be drawn from the fact of their near alliance with each other, and the consequent plasticity of the races relatively. No process of breeding, more certainly develops primordial characteristic than that of crossing. The significance of a cross may antedate all history, leaping a chasm of centuries of time.

The Italian queen from which my experiments were made this year, was sent me as a tested one by a breeder of assured integrity, yet such was the tendency to sports in the second generation of queens bred from her, that I at first hesitated in the belief of her purity, but reflecting that the Italian is a continental race, and that the Cyprian is of insular breeding, I conclude that this is precisely the development that should be anticipated. The sporting in color has been upon varied shades of ming'ed chestnut and yellow. The queens that I have seen from Cyprians bred to Italian drones have been uniformly marked, showing the prepotency and purity of the Cyprian relatively. Queens bred from the Italian, being of the second generation mated to Cyprian drones were prolific and gentle. The first crosses of bees are as a class active, prolific, hardy and industrious. Formerly, I was inclined to find a reason for this in the idea that the strongest and most energetic queens would seek their matings at greatest distances of flight from their homes, and I yet ascribe importance to that view, but the analogies point to the conclusion that the result arises mainly from crossing. Flowers show undoubted co-adaptation to pollen brought from other individuals of the same race, and hence, perhaps, the conclusion among botanists that the pollen or male principle is prepotent with flowers. It should not be forgotten that hybrids may lose their qualities as easily as pure races when too closely inter-bred. In view of the foregoing, I accept it as a theoretical proposition that a race of bees should be sustained by new blood. Since among bees, the queen submits the question of the survival of the fittest to the wager of battle, and since the queen gives character largely to her progeny, I submit the hypothesis, that when a race of bees produce queen-cells in large numbers, this handing over to the best fighter among many the possession of the colony, the race itself, may reasonably be expected to afford staunch defenders of their rights. I have counted 75 per-

fect queen-cells in a single colony of Cyprians, formed under natural impulse. It would be irrational to deny to the survivor of 75 queens in battle, her well-earned laurels.

I close this paper with an apt quotation from an article by Sir J. Lubbock, "on certain relations between plants and insects." He says: "I venture to think the evidence now brought forward, however imperfectly, is at least sufficient to justify the conclusion that there is not a hair, or a line, not a spot, or a color, for which there is not a reason, which has not a purpose or a meaning in the economy of nature." Shelbyville, Ky.

Utah Bee-Keepers' Convention.

The Utah bee-keepers' assembled at Salt Lake City, on Oct. 5, at 7 p. m. Pres. A. M. Musser in the chair.

Tooele county was represented by Secretary T. W. Lee, who said that in Tooele City they started with 65 colonies of bees this spring. Their increase had been 96 swarms, making a total of 161 colonies at this time in good condition for winter. The honey season had been fair this year. They had extracted 3,060 pounds of honey, and taken considerable comb honey. Swarming commenced on the 28th of May. Some of our bee-keepers allowed natural swarming, while others divided for increase. They had no foul brood. In Grantsville there was no organization, but would like a branch association there. They were pleased with the profitable enterprise and would try and give a better report next meeting.

Vice President Samuel McKay put into winter quarters 76 colonies of bees, in good condition, and, when the very late spring set in, he had only 15 colonies left and some of them in a very weak condition. He had nursed and cared for them this summer, and had them back nearly to their former number, having his hives well stocked with combs and honey, facilitating very much his increase, but he had not taken much honey this year. Some of his hives now had 90 lbs. of honey in them. From the best information he could gain, about 90 per cent. of the bees had died in Salt Lake county. The sudden changes of last winter and the late spring, he thought was the cause of so many losses. Mr. Murphy, of Mill Creek, had lost 100 colonies out of 107. Mr. Bailey also had lost nearly all of his bees at the same place. Mr. Woodruff lost his entire stock of over 20 colonies; also John and Edward Morgan, of Mill Creek, lost all of their colonies. W. A. O. Smoot, of Sugar House Ward, lost 40 colonies. The loss to Mr. Murphy alone would be, counting his colonies at \$12 each, \$1,200.

A question, by Secretary Lee, was asked: Could a September swarm of bees be successfully wintered if furnished with young brood and honey?

Edward Stevenson said that two years ago, late in September, he captured a stray swarm and gave them to one of his small boys. The night he

hived them was so frosty that a few straggling bees around the hive perished. Some young brood and honey was given them, and now there were 4 good colonies, and surplus this year.

Geo. Luff, of this city, had 17 colonies last fall, 10 this spring; 4 died during the late spring; has 9 now, and had taken 100 lbs. of honey this season.

Bishop Madson, said there were 20 colonies of bees in that place, all in good condition. The inspector of Manti had visited and pronounced their bees healthy. Did not know how much honey was taken.

Edward Stevenson, of this county, said his experience in the mortality of bees, during the past winter and spring, excelled any previous year, in this county, but he could not agree with Mr. McKay, of 90 per cent. being the average loss, but thought 50 per cent. would cover it. In East Mill Creek 5 colonies of his bees wintered on a plank close to the ground, the snow drifted against them and remained in that condition until late in the spring, and while other bees, exposed to the warm rays of the sun, would often fly out, and the cool air and snow on the ground caused them by thousands to chill and fall into the snow, thus depleting the colonies, so that the late spring and cool frosty nights either caused them to dwindle away so that they could not gather honey from fruit bloom, and entirely perished, as hundreds of colonies did, but those 5 colonies imprisoned, could not waste away, and, consequently, were strong, and able to gather supplies from fruit bloom and other blossoms. They increased to 15 this season. Some of them are in two-story hives, and now have 100 lbs. of honey each; 2 colonies have gathered 300 or 400 lbs of honey this season, from the five thus wintered.

Bishop Bills, of South Jordan, wintered quite a number of colonies of bees, surrounded by chaff, in long boxes, removing to tops of the hives, placing cloths over them, and then chaff, keeping them mouse-proof. So that the warm rays of the sun could not affect them until it was sufficiently warm for them to fly and return home again. He lost none during the winter.

Pres. Musser said that the bee industry should be interesting and kept alive. It paid a better per cent. than farming, and other industries, when intelligently managed. Honey has medicinal properties and is healthy, as well as a luxury. Thought it would be well to have blanks to be filled as reports from branch associations. Said some considered the smoke from the numerous smelters in this city detrimental to apiculturists.

E. Stevenson moved that a committee be appointed from this meeting to get up blanks to be sent to branch associations, to be filled up and returned, to facilitate general reports from the various counties of our Territory. The motion was carried. Edward Stevenson and Wm. Egan were appointed as that committee. The convention adjourned until next April 5th. Benediction by Mr. Thos. Lee.

E. STEVENSON, Sec.

SELECTIONS FROM OUR LETTER BOX

The Sweet Clover Still in Bloom.—On Nov. 1st, 1881, I sent you a few sprigs of sweet clover. I now send you another bunch, picked in an open field to-day, it is just as sweet and fresh now as then. This clover has been in blossom continuously since about July 1, and the bees have visited it whenever the weather was favorable. The past season was a very good one, yet I fully believe that 10 acres of sweet clover would have been worth \$500 to me. I shall sow several acres next spring. I have been experimenting with a number of honey plants, for several years, but find nothing equal to sweet clover.

C. H. DIBBERN.

Milan, Ills., Nov. 1st, 1882.

[It is indeed of "sweet-smelling savor" and shows its value as a honey plant—blooming till long after the weather will allow the bees to fly.—Ed.]

Cowardly Bees.—I have one colony of bees that will not defend themselves against invaders. They have a good queen, and are strong in numbers, with plenty of stores. I have tried everything I have read or heard of, to induce them to have more spirit, but all to no purpose. If I cannot find some effectual remedy soon, I shall resort to brimstone. Who can give me a prescription?

W. D. SMYSER.

Nineveh, Ind., Oct. 27, 1882.

One Hundred Pounds of Honey per Colony.—I am not able to make a complete report for the past season, for I have not taken off all my surplus honey yet; but enough to show that I shall obtain 100 lbs. to the colony, spring count. We have had the heaviest honey flow ever known in this section. I shall put into winter quarters about 40 colonies. I had 20 in the spring. I wish to build a "honey house" and shop, combined, in the spring, and would like for someone to give a good plan, dimensions, etc., in the AMERICAN BEE JOURNAL, at an early day.

W. H. GRAVES.

Duncan, Ill., Oct. 25, 1882.

Chilled Brood and Robbing.—I started, spring count, with 2 strong and 1 weak colonies, and bought of Mr. Robertson, of Pewamo, 1 fine colony and 4 tested queens. One of the queens died soon after being introduced, through a very cold spell which we had about the first of June; the other three queens did well. I only increased from 4 to 7, and from these I took only 70 lbs. of extracted honey, from frames having no brood. White clover was a poor crop; basswood gave nothing, on account of wet weather. In the early fall I had 5 strong and 2

good colonies, with plenty of stores, and had serious intentions of dividing 3 of them. I noticed the brood was not hatching out; it appeared chilled (no bad smell from it). I had one thickness of burlap over the frames, and at once put two and three thickness more on; still the brood did not hatch, though the weather was very fine and warm. Some of the young bees could only get their heads out, and then die. The bees, of course, commenced to dwindle; they had plenty of stores, on an average, on which to winter. I commenced feeding granulated sugar, 8 lbs. to 6 lbs. of water, in syrup, taking care while boiling not to scorch or burn. I fed from 12 to 20 lbs. per hive, as I thought they needed it. To cap all, while in Toronto, Sunday, Oct. 22, my bees commenced robbing and on Monday I had the remnants of 3 colonies. I put these together and now have a moderate one, with plenty of stores. Can you give me any idea of all this trouble, particularly the cause of the brood not hatching? I use frames 18x10x1. My hives are double, with 2 inches of a space all around, some of them packed with leaves.

S. G. HOLLEY.

New Hamburg, Ont., Oct. 57, 1882.

[Your colonies were evidently weak. From some cause or other there must have been a loss of old bees, until there were too few of them to take care of the brood, and so it became "chilled," resulting in still more weakening the colonies—no young bees to take the place of those dying from old age or other causes. Still more proof for this theory is found in the fact that they were unable to protect themselves from the robbers. Weak colonies are an easy prey, and very often such will incite the bees to excessive robbing.—Ed.]

Peppermint to Prevent Stings.—Has any one used peppermint, rubbed on their hands, while handling bees? I have used it, and very rarely do I get stung. We now have a good spell of weather after the snow storm. Bees are out briskly. We have a plant that is called skunk weed, that bees even go miles to work upon, in the fall. It seems to grow best on our country roads. I do not know of but one plant growing in a garden in this city. I saw a few plants the other day, and bees were working on them, although they did not appear to have any honey about them. I will send you a sprig of them when I go out in the country again. I send you a report of the bee convention held in Salt Lake City, on the 5th inst.; 3,060 lbs. is not all the honey that should be reported from this city: two of our largest bee men did not report; 1,000 lbs. is the largest yield from one apiary. Thanks to Mr. Heddon for his article on the easy way of wintering bees, on page 659 of the AMERICAN BEE JOURNAL.

JOHN DUNN.

Tooele City, Utah, Oct. 26, 1882.

Bees in Clamps.—Please inform me, through the BEE JOURNAL, of the best method of storing bees in clamps. When should they be put into the clamps? When should they be taken out, in the spring? How would thaws affect them in clamps?

A SUBSCRIBER.

[Our subscriber will find his queries answered in Mr. Jones' article on Wintering Bees, found on pages 709 and 710 of this paper.—ED.]

Sweet Clover yet alive with Bees.—W. S. Bair, of Rollersville, O., gives such a good report in the BEE JOURNAL for Oct. 4th, of the success of his plan of tiering up with his large hive, that as I use a hive having the same size frames, I intend to give it a trial, with one hive, next spring, I would like him to tell whether the entrance in the upper as well as the lower hive is to be left open, also, if he waits till the honey season is over to extract from the lower story. Also, whether he finds brood in both stories or only in the upper one?

Do the roots of cleome, which has flowered this summer, live through the winter and grow up again next year? I am much pleased with it as a honey plant, though it does not continue in bloom as long as either melilot or mignonette, still it is very good, especially for Italian bees, which work on it from day light till dark all the time it is in bloom, which is for many weeks. Melilot and mignonette are still in full flower, and alive with bees every fine day, which is more than can be said for any other honey plants that I know of.

H. F. BULLER.

Campbellford, Ont., Oct. 19, 1882.

[Cleome is a biennial, blooming the second year after being planted, and reseeds itself. It may be sown either broadcast or in drills; if the latter, let the drills be 30 inches apart, with plants about every six inches.—ED.]

Entrance regulating Bottom Board.—I send you, by to-day's mail, a rough model of the bottom board I use. It will show for itself, without explanation, further than that the hives will fit anywhere, top or bottom. You can give it to the readers of the BEE JOURNAL, if you think it worthy.

F. M. JOHNSON.

Greystone, Ct., Oct. 4, 1882.

[It is a loose, bottom board, with a portion cut out in front to regulate the entrance. Such an entrance-regulating bottom board has been illustrated several times in the BEE JOURNAL. It has some advantages, but there are many objections to using it, and we think the latter will more than counterbalance the former.—ED.]

Planting Basswood Trees.—The BEE JOURNAL makes a welcome visit to our home each Wednesday. I commenced this spring with one colony of bees, in a box hive, transferred them

to the Mitchell hive, and have increased to four good strong colonies, besides taking 80 lbs. of comb honey. My bees are blacks, and I have used no foundation. Can you inform me how to raise basswood trees from the seed?

HERBERT LUTHER.

Lemont, Ill., Oct. 26, 1882.

[It is hardy and grows readily from the seed. I had been known to bloom and secrete honey in six years after planting. The seeds should be sown in drills, and cultivated for a year, and then should be transplanted, leaving them from 10 to 14 feet apart each way. Yearlings transplanted from the bottom lands are very desirable.—ED.]

Troublesome Mice.—Is it better to take off the tops of the bee hives during winter? I have cushions on, would the tops left on, with cushions, cause dampness? If the tops were left off, would wire screen on top of the frames, with cushion on top, do any harm? The wire sieve on is to exclude mice, when I leave off the top. I winter in bee hives.

GEO. KEMP.

[Yes; the tops should be taken off; wire cloth over the frames, to keep out mice, will do no harm.—ED.]

Will it pay to use Sections.—I commenced with 24 colonies last spring; increased to 48, by natural swarming. My bees are black bees. I took off 2,500 lbs. of comb honey in 3½ lb. boxes. I had not the means to obtain sections. I sold at home for 15 cents per pound. I am satisfied that I should do better if it had been in sections. Preparing the hives for sections will cost quite a little. I lost a good deal by tramps, say 70 lbs. Last year it amounted to 50 lbs. I thought of making a high board fence, eight feet high; would it hinder the bees from coming home with their loads of honey? I want to move my bees 20 rods. Had I better do it this fall or next spring?

JOSEPH LEE.

Farmers', Mich.

[Certainly, it will pay to get honey in sections instead of the old-fashioned boxes, no matter what it may cost to alter over the hives. A board fence will be no particular detriment to the bees, if the apiary is not too contracted. You can move the bees now without materially injuring them, just as well as you could in the spring.—ED.]

Honey Crop for 1882.—Jack Frost closed the honey season with me on Sept. 21. My honey crop amounts to 3,077 lbs. from 20 colonies in the spring. I increased them, by natural swarming and dividing, to 40 colonies. They all have sufficient to winter on, of good capped honey. I have packed them on the summer stands. I sell all my honey in my home market—comb at 20 cents, and extracted at 15

cents. Young white clover never looked better at this time of the year.

R. M. OSBORN.

Kane, Ill., Oct. 27, 1882.

My first Experience.—I commenced this spring with eight black and two hybrid colonies of bees. In May I procured three dollar queens of Dr. Brown, of Georgia, which proved to be as good as any I want; one was a Cyprian and the other two Italians. They are in good condition for winter. I use the Langstroth hive.

Casey, Ill. D. R. ROSEBROUGH.

Sundry Questions.—My queen ceased laying Sept. 25, I presume on account of the cool weather. Upon examining the colony since placing it in winter quarters (which is a large box filled with sawdust) the queen has commenced laying anew and some of the brood is capped over. 1. Is it the increased warmth occasioned by the packing that causes that? 2. Is this late breeding desirable? The bees are bringing in a very little pollen, but scarcely any honey. I fed them honey comb Sept. 15 from another colony; 3. Will they consume this in breeding? 4. I have one comb of unsealed honey. Will this keep until spring or must I feed it now? 5. Will a full comb of pollen keep until spring? 6. Are bees attracted by cheese?

ROLLAND McDONALD.

Montreal, Canada, Oct. 18, 1882.

1. It is.
2. No; it is too late.
3. They will, if they need it.
4. You can extract it, if the bees do not require it.
5. Yes.
6. Not that we are aware of.—ED.]

Candied Honey.—How shall I get candied honey out of a barrel, to put it into cans? What tools are necessary to do it?

F. MINNICH.

North Freedom, Wis., Nov. 2, 1882.

[The best way is to fill the pails while it is liquid and let it candy after being put into the pails. It can, however, be dug out with a strong hand scoop, or a wide knife, but it is a very slow and tedious job.—ED.]

The Western Michigan Bee-Keepers' Association will meet at Supervisors' Hall, in the city of Grand Rapids, on Wednesday and Thursday, Nov. 29th and 30th, 1882. The co-operation of all bee-keepers of this section is desired.

WM. M. S. DODGE, Sec.

The New York Weekly Tribune says in regard to the Noyes Dictionary Holder, manufactured by L. W. Noyes, 99 West Monroe St., Chicago: "We know of but one satisfactory Holder; that, however, is so good that a second is not needed." Mr. Noyes sends to all applicants a handsome illustrated circular. Prices reduced.

THE AMERICAN BEE JOURNAL

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THOMAS G. NEWMAN,
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The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for \$1 to \$5 are 5 cents; over \$5 to \$10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

- For a Club of 2,—“Bees and Honey,” in paper.
 “ 3,—an Emerson Binder, or “Bees and Honey,” in cloth.
 “ 4,—Apiary Register for 50 Colonies, or Cook’s Manual, paper.
 “ 5,—Cook’s Manual in cloth, or the Apiary Register for 100 Colonies.
 “ 6,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col’s.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to new Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, “Presented by,” etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages).....	\$1 00
“ 100 colonies (220 pages).....	1 50
“ 200 colonies (420 pages).....	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employees, or some cause beyond our control.

Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Kendall’s Spavin Cure is used from the Atlantic to the Pacific coast.

CLUBBING LIST.

We supply the American Bee Journal and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers’ Price. Club.
The Weekly Bee Journal,.....	\$2 00..
and Gleanings in Bee-Culture (A.I. Root) 3 00..	2 75
Bee-Keepers’ Magazine (A.J. King) 3 00..	2 80
Bee-Keepers’ Exchange (Houk & Peet) 3 00..	2 80
Bee-Keepers’ Guide (A.G. Hill).....	2 50.. 2 35
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The Monthly Bee Journal and any of the above, \$1 less than the figures in the last column.	

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

We will send Cook’s Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for \$3.00; or with King’s Text-Book, in cloth, for \$2.75; or with Bees and Honey, in cloth, \$2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Sample Copies of the AMERICAN BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL, }
Monday, 10 a. m., November 8, 1882. }

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.**CHICAGO.**

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 6½c. for dark and 6c. for light, delivered here. **BEESWAX**—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 18@20c. on arrival; extracted, 7@10c. **BEESWAX**—Firm at 20@25c. per lb.

CHAS. F. MUTH.

Quotations of Commission Merchants.**CHICAGO.**

HONEY—The demand increases with the cool weather, but not sufficiently fast to keep pace with receipts, which now accumulate, as it is time to get the surplus into market. Prices remain unchanged with perhaps a tendency downward, owing to many consignors desiring to realize quickly.

We quote: white comb, in small sections, 19@20c. Fine, well-filled, 1 lb. sections bring the outside price. Dark comb honey, little demand, 15@16c. Light honey, in larger boxes, 12@16c. Extracted—white clover, 9½@10c.; dark, 8@9c., in barrels and half-barrels. Kegs will bring but a small advance, if any, above half-barrels.

BEESWAX—Very scarce. Choice Yellow, 30c.; dark to fair, 26@24c.

R. A. BURNETT, 163 South Water St.

SAN FRANCISCO.

HONEY—Market is quiet, and for strictly choice prices are firm. Medium and dark qualities are not in special request. For a lot of fair comb, unbroken, 13c. is the best offer made, 15c. asked.

White comb, 18@20c.; dark to good, 12@15c.; extracted, choice to extra white, 9@10c.; dark and candied, 7½@8½c.

BEESWAX—We quote 25@27½c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and slow. We quote, in lots, comb at 15@18c.; strained at 6@7c.; extracted at 9@10c.

BEESWAX—Prime bright quotable at 27c.

R. C. GREER & Co., 117 N. Main Street.

CLEVELAND.

HONEY—In sections, has been in extraordinary demand this week, at full prices. Sales have been quite up to receipts, and all lots except recent arrivals were closed out. One pound sections of best white sells for 21@22c. per pound, in attractive packages. Same quality, in less attractive shape, 20@21c. In 1½ to 2 lb. sections, best quality, 19@20c. Second grade sells about 1@2 cents per lb. less. Buckwheat is unsalable. Extracted, in small packages, pails and tin cans sells pretty well at 14@15c.; but extracted, in barrels, is very dull at 10@11c.

BEESWAX—Prime quality, 25@28c.

A. C. KENDAL, 115 Ontario Street.

NEW YORK.

HONEY—There is a fair supply of honey scattered around, but the movement is as yet rather moderate, though prices held steady, with fancy white clover in boxes occasionally exceeding quotations slightly.

We quote: White clover, fancy, small boxes, 19@20c.; white clover, fair to good, 16@18c. Buckwheat, 13@16c.

BEESWAX—There is only a moderate demand for wax, but the supply is small and generally under control, and held firmly at 28@31c., according to quality.

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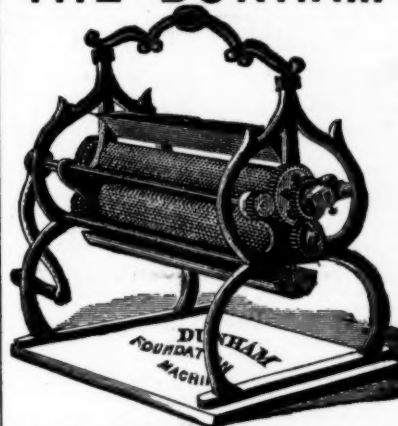
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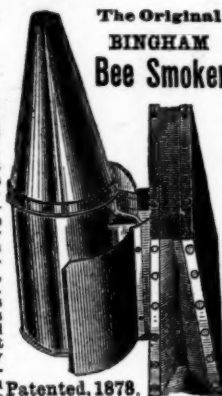
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